Rocky Flats Environmental Technology Site

PRE-DEMOLITION SURVEY REPORT (PDSR)

BUILDING 903B CLOSURE PROJECT

REVISION 0

September 2, 2004

CLASSIFICATION REVIEW NOT REQUIRED PER EXEMPTION NUMBER CEX-005-02

1/46

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REVISION 0

September 2, 2004

Reviewed by: _____ Date: 9/2/04
Don Risoli, Quality Assurance

Reviewed by: _____ Date: 9/2/04
D.P. Snyder, RISS ESH&Q Manager

Approved by: _____ Date: 9/2/04
Harry Linsinbigler, K-H D&D Project Manager
For H Linsinbigler

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ATTACHMENTS

ABBREVIATIONS/ACRONYMS

ACM	Asbestos Containing Material
Be	Beryllium
CDPHE	Colorado Department of Public Health and the Environment
$DCGL_{EMC}$	Derived Concentration Guideline Level – elevated measurement comparison
$DCGL_W$	Derived Concentration Guideline Level – Wilcoxon Rank Sum Test
D&D	Decontamination and Decommissioning
DDCP	Decontamination and Decommissioning Characterization Protocol
DOE	U.S. Department of Energy
DPP	Decommissioning Program Plan
DQA	Data quality assessment
DQOs	Data quality objectives
EPA	U.S. Environmental Protection Agency
FDPM	Facility Disposition Program Manual
HVAC	Heating, ventilation, air conditioning
HSAR	Historical Site Assessment Report
HEUN	Highly Enriched Uranyl Nitrate
IHSS	Individual Hazardous Substance Site
IWCP	Integrated Work Control Package
K-H	Kaiser-Hill
LBP	Lead-based paint
LLW	Low-level waste
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
NORM	Naturally occurring radioactive material
NRA	Non-Rad-Added Verification
OSHA	Occupational Safety and Health Administration
PARCC	Precision, accuracy, representativeness, comparability and completeness
PCBs	Polychlorinated Biphenyls
PDS	Pre-demolition survey
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFFO	Rocky Flats Field Office
RLC	Reconnaissance Level Characterization
RLCR	Reconnaissance Level Characterization Report
RSA	Removable Surface Activity
RSP	Radiological Safety Practices
SVOCs	Semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TSA	Total surface activity
VOCs	Volatile organic compounds

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EXECUTIVE SUMMARY

A Pre-Demolition Survey (PDS) was performed to enable compliant disposition and waste management of Building 903B. Because this Type 2 building will be demolished, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP). Building surfaces characterized as part of this PDS included the floors, walls, ceiling, roof, and equipment. Environmental media beneath and surrounding the facility was not within the scope of this PDS and will be addressed in accordance with the Soil Disturbance Permit process and in compliance with RFCA.

The PDS encompassed both radiological and chemical characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP). The characterization built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report.

Results indicated that no radiological or chemical contamination exists in excess of the PDSP unrestricted release limits. Asbestos abatement is not required per Colorado Department of Public Health and Environment (CDPHE) Regulation 8. Beryllium sample results were below the investigative level of 0.1 $\mu g/100cm^2$. Any potentially PCB-containing fluorescent light ballasts and hazardous waste items (e.g., mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury-containing gauges, circuit boards, leaded glass, and lead-acid batteries) will be removed from the building prior to demolition.

Based upon the PDSR, Building 903B can be demolished and the waste managed as sanitary waste or PCB Bulk Product waste (if non-leaking PCB ballasts are left in the structure). To ensure that the facility remains free of contamination and PDS data remain valid, Level 2 isolation controls have been established and the area posted accordingly.

1 INTRODUCTION

A Pre-Demolition Survey (PDS) was performed to enable compliant disposition and waste management of Building 903B. Because this Type 2 building will be demolished, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP). Building surfaces characterized as a part of this PDS included floors, walls, ceilings, roof and equipment. Environmental media beneath and surrounding the facility was not within the scope of this PDS and will be addressed in accordance with the Soil Disturbance Permit process and in compliance with RFCA.

An RLCR was not performed for this facility. Instead a RFCA Contact Record was written (*Building 903B and 903B Reconnaissance Level Characterization*, dated 6/30/04), that discusses the process history of the facility. Based on the process history, the facility was classified as a Type 2 RFCA facility and recorded as such in the Contact Record.

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed, among these is Building 903B. The location of this facility is shown in Attachment A, *Facility Location Map*. This facility no longer supports the RFETS mission and will be removed to reduce Site infrastructure, risks and/or operating costs.

Before this Type 2 facility can be demolished, the Data Quality Objectives (DQOs) for a Pre-Demolition Survey (PDS) must be satisfied; this document presents the PDS results for Building 903B. The PDS was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). The PDS is built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report for Building 903B, dated December 2002, Revision 0.

1.1 Purpose

The purpose of this report is to communicate and document the results of the Building 903B PDS effort. A PDS is performed prior to building demolition to define the final radiological and chemical conditions of a facility. Final conditions are compared with the release limits for radiological and non-radiological contaminants. PDS results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types.

1.2 Scope

This report presents the final radiological and chemical conditions of Building 903B. Environmental media beneath and surrounding the facility is not within the scope of this PDSR and will be addressed in accordance with the Soil Disturbance Permit process and in compliance with RFCA.

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1.3 Data Quality Objectives

The Data Quality Objectives (DQOs) used in designing this PDS were the same DQOs identified in the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). Refer to section 2.0 of MAN-127-PDSP for these DQOs.

2 HISTORICAL SITE ASSESSMENT

A Facility-specific Historical Site Assessment (HSA) was conducted to understand the facility history and related hazards. The HSA consisted of facility walkdowns, interviews, and document review, including review of the Historical Release Report. A RLCR was not performed for Building 903B – refer to RFCA Contact Record, DAP-024, dated June 30, 2004, for a discussion and approval for not performing the Building 903B RLCR. Based on the HSA and Contact Record, Building 903B was classified as a Type 2 Facility. The HSA results were used to identify PDS data gaps and needs, and to develop radiological and chemical PDS characterization packages. HSA documentation is located in Attachment E, *Historical Site Assessment*. Note: for purposes of this PDSR, the 903B "sump" as defined in the HSA, was treated as part of the floor surfaces during the PDS characterizations.

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

Building 903B was characterized for radiological hazards per the PDSP. Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describes the minimum survey requirements (refer to the RISS Characterization Project files for the Building 903B Radiological Characterization Plan). Individual radiological survey unit packages are maintained in the RISS Characterization Project files.

Radiological survey unit packages 903002 (interior) and 903003 (exterior) were developed for Building 903B in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*. Radiological survey data, statistical analysis results, survey locations, and radiological scan maps are presented in Attachment B, Radiological Data Summary and Survey Maps.

Building 903B was classified as a MARSSIM Class 2 Survey Unit because this building was not expected to contain residual radioactivity greater than the $DCGL_W$, but had a potential for low levels of contamination. A total of 41 TSA measurements (37 systematically grid, and 4 QC) and 37 RSA measurements (37) were taken and scan surveys performed. Alpha scan surveys of 20% of accessible interior and exterior surfaces (211 m^2 minimum) at biased locations were performed. None of the measurements or scans indicated elevated activity above applicable transuranic DCGL values. Based on surveys of interior portions of tanks, sumps and other accessible equipment, all waste-water processing equipment associated with B903 (located both inside and outside of the building) meets the PDSP unrestricted release criteria. Radiological survey data, statistical analysis results, survey locations, and radiological scan maps are presented in Attachment B, *Radiological Data Summary and Survey Maps.*

4 CHEMICAL CHARACTERIZATION AND HAZARDS

Building 903B was characterized for chemical hazards per the PDSP. Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on, or in the facility. Based upon a review of historical and process knowledge, visual inspections, and PDSP DQOs, additional sampling needs were determined. A Chemical Characterization Plan was developed during the planning phase that describes sampling requirements and the justification for the sample locations and estimated sample numbers. The contaminants of concern were asbestos and beryllium. Refer to Attachment C, *Chemical Summary Data and Sample Maps*, for details on sample results and sample locations. Isolation control postings are displayed on affected structures to ensure no hazardous materials are introduced.

4.1 Asbestos

A survey of building materials suspected of containing asbestos was conducted in Building 903B during the PDS. A CDPHE-certified asbestos inspector conducted the inspections, and suspect materials were identified for sampling at the discretion of the inspector. No suspect materials were identified, therefore, asbestos sampling was not performed as part of the PDS.

4.2 Beryllium (Be)

Seven (7) biased beryllium smear samples were collected on the interior surfaces of Building 903B in accordance with the PDSP and the *Beryllium Characterization Procedure,* PRO-536-BCPR, Revision 0, September 9, 1999. All beryllium PDS smear sample results for Building 903B were less than the investigative limit of 0.1 $\mu g/100cm^2$. PDS beryllium laboratory sample data and location maps are contained in Attachment C, *Beryllium Data Summaries and Sample Maps.*

4.3 RCRA/CERCLA Constituents [including metals and volatile organic compounds (VOCs)]

Based on the HSAR, facility walk-downs and a review of RFETS waste management databases, Building 903B was used to manage wastewater from equipment decontamination activities. The water was collected at 903B before being transferred to Building 891. There are no documented or suspected spills of the decontamination water within the 903B facility. Additionally, the water from 903B has only contained trace amounts of RCRA/CERCLA constituents, well below levels that would lead to a concern of contamination above regulatory limits. On this basis, sampling was not performed as part of this PDS. However, since the RCRA Unit 18.01 was only partially closed in 1996, the CDPHE agrees (in contact record dated September 16, 2004) that the tanks residing in 903B will be closed as ancillary equipment pursuant to the closure of the 903A decontamination pad.

Painted surfaces were not sampled for lead. Environmental Waste Compliance Guidance #27, *Lead-based Paint (LBP) and Lead-based paint Debris Disposal*, states that LBP debris generated outside of currently identified High Contamination Areas shall be managed as non-hazardous (solid) wastes, and additional analysis for characteristics of hazardous waste derived from LBP is not a requirement for disposal. There were no High Contamination Areas associated with Building 903B.

The building may contain some RCRA regulated items, such as mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury containing gauges, circuit boards, and lead-acid batteries. These items will been removed and managed in accordance with the Colorado Hazardous Waste Act prior to demolition.

4.4 Polychlorinated Biphenyls (PCBs)

Based on the HSAR, interviews, facility walk downs and a review of historical WSRIC processes, PCBs were not introduced into the facility, therefore, sampling for PCBs was not conducted as part of this PDS.

Based on the age of Building 903B, paints used on the facility did not contain PCBs; and therefore, painted surfaces will not be managed as PCB Bulk Product Waste. Painted concrete surfaces can be used as backfill on site in accordance with approval received from EPA in November 2001 (letter from K. Clough, US EPA Region 8, to J. Legare, DOE RFFO, 8EPR-F, Approval of the Risk-Based Approach for Polychlorinated Biphenyls (PCB)-Based Painted Concrete), provided the concrete meets the unrestricted-release criteria outlined in the Concrete Recycling RSOP.

Although unlikely, The facility may have contained PCB fluorescent light ballasts, however, all leaking PCB ballasts, and those greater than 9 pounds, will be removed from the facility and managed appropriately. If non-leaking PCB ballasts remain in the building during demolition the debris will be managed as PCB Bulk Product waste.

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5 PHYSICAL HAZARDS

Physical hazards associated with Building 903B consists of those common to standard industrial environments, and include hazards associated with energized systems, utilities, and trips and falls. There are no other unique hazards associated with the facility. The facility has been relatively well maintained and is in good physical condition, and therefore, does not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practices.

6 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of Building 903B, and consequent waste management, are of adequate quality to support the decisions documented in this report. The data presented in this report (Attachments B and C) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original project DQOs.

In summary, the Verification and Validation (V&V) process corroborates that the following elements of the characterization process are adequate:

- ◇ the *number* of samples and surveys;
- ◇ the *types* of samples and surveys;
- ◇ the sampling/survey process as implemented "in the field"; and
- ◇ the laboratory analytical process, relative to accuracy and precision considerations.

Details of the DQA are provided in Attachment D.

7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of Building 903B will generate sanitary waste (if PCB ballasts remain in the structure during demolition the structural debris will be managed as PCB Bulk Product waste). Estimated waste volumes are presented below. PCB ballast and hazardous waste items will be removed and managed pursuant to Site PCB and waste management procedures prior to demolition.

WASTE TYPES AND VOLUME ESTIMATES

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
903B	1,400	0	1,700	1,000	0	0	None

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8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the PDS analysis of radiological, chemical and physical hazards, Building 903B meets PDSP unrestricted release criteria. PCB ballast and hazardous waste items will be removed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations prior to demolition.

The PDS for Building 903B was performed in accordance with the DDCP and PDSP, all PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. Environmental media beneath and surrounding the facility will be addressed at a future date in accordance with the Soil Disturbance Permit process and in compliance with RFCA. To ensure that Building 903B remains free of contamination and PDS data remain valid, Level 2 Isolation Controls have been established and the facility posted accordingly.

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9 REFERENCES

DOE/RFFO, CDPHE, EPA, 1996. *Rocky Flats Cleanup Agreement (RFCA)*, July 19, 1996.

DOE Order 5400.5, *Radiation Protection of the Public and the Environment*

DOE Order 414.1A, *Quality Assurance*

EPA, 1994. *The Data Quality Objective Process,* EPA QA/G-4.

K-H, 1999. *Decommissioning Program Plan*, June 21, 1999.

MAN-131-QAPM, *Kaiser-Hill Team Quality Assurance Program*, Rev. 1, November 1, 2001.

MAN-076-FDPM, *Facility Disposition Program Manual*, Rev. 3, January 1, 2002.

MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol*, Rev. 4, July 15, 2002.

MAN-127-PDSP, *Pre-Demolition Survey Plan for D&D Facilities*, Rev. 1, July 15, 2002.

MARSSIM - *Multi-Agency Radiation Survey and Site Investigation Manual* (NUREG-1575, EPA 402-R-97-016).

PRO-475-RSP-16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation, and Closure,* Rev. 1, May 22, 2001.

PRO-476-RSP-16.02, *Pre-Demolition (Final Status) Radiological Surveys of Surfaces and Structures*, Rev. 1, May 22, 2001.

PRO-477-RSP-16.03, *Radiological Samples of Building Media*, Rev. 1, May 22, 2001.

PRO-478-RSP-16.04, *Radiological Survey/Sample Data Analysis for Final Status Survey*, Rev. 1, May 22, 2001.

PRO-479-RSP-16.05, *Radiological Survey/Sample Quality Control for Final Status Survey*, Rev. 1, May 22, 2001.

PRO-563-ACPR, *Asbestos Characterization Procedure,* Revision 0, August 24, 1999.

PRO-536-BCPR, *Beryllium Characterization Procedure*, Revision 0, August 24, 1999.

RFETS, Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition.

RFETS, Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal.

RFETS, RFCA RSOP for Recycling Concrete, September 28, 1999

Historical Site Assessment Report for the Area 5 – Group 14 Facilities, dated December 2002, Revision 0.

RFCA Contact Record, *Building 903B and 903B Reconnaissance Level Characterization*, dated 6/30/04.

Closure Description Document For Partial Closure Of RCRA Interim Status Unit 18.01, DOE Letter 04-DOE-00081, Dated March 11, 2004.

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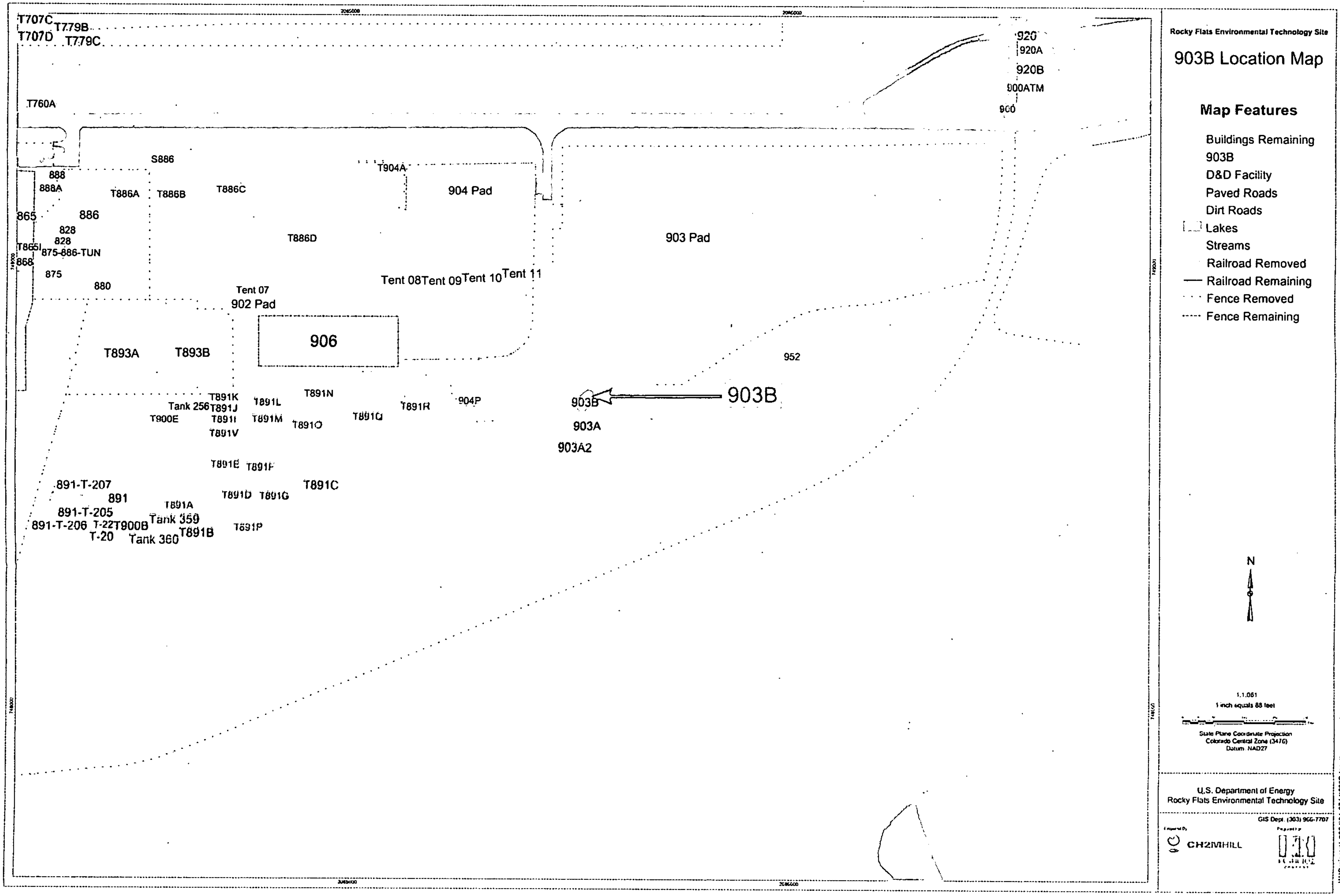
ATTACHMENT A

Facility Location Map



Rocky Flats Environmental Technology Site
903B Location Map
Map Features
Buildings Remaining
903B
D&D Facility
Paved Roads
Dirt Roads
Lakes
Streams
Railroad Removed
Railroad Remaining
Fence Removed
Fence Remaining
N
1 inch equals 88 feet
State Plane Coordinate Projection
Colorado Central Zone (3476)
Datum: NAD27
U.S. Department of Energy
Rocky Flats Environmental Technology Site
CH2MHILL
903B
903A
903A2
903 Pad
904 Pad
902 Pad
906
952
904P
920
920A
920B
900ATM
900
T707C
T707D
T779B
T779C
T760A
S886
T904A
888
888A
T886A
T886B
T886C
865
886
828
828
T865I
875-886-TUN
868
875
880
T886D
Tent 07
Tent 08
Tent 09
Tent 10
Tent 11
T893A
T893B
T891K
T891J
Tank 256
T900E
T891L
T891M
T891N
T891O
T891Q
T891R
T891V
T891E
T891F
T891C
T891D
T891G
891-T-207
891
891-T-205
891-T-206
T-22
T900B
T-20
T891A
Tank 359
Tank 360
T891B
T891P

ATTACHMENT B

Radiological Data Summaries and Survey Maps

Survey Area: 5	Survey Unit: 903002	Building: 903B
Description: Building 903B Decon Station Interior		

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Nbr Random Measurements Required: 15 | Nbr Biased Measurements Required: 0 | Nbr QC Required: 2

Nbr Random Measurements Performed: 21 | Nbr Biased Measurements Performed: 0 | Nbr QC Performed: 2

Alpha

Maximum:	23.0 dpm/100cm²
Minimum:	-8.4 dpm/100cm²
Mean:	0.3 dpm/100cm²
Standard Deviation:	7.1
QC Maximum:	10.1 dpm/100cm²
QC Minimum:	5.5 dpm/100cm²
QC Mean:	7.8 dpm/100cm²
Transuranic $DCGL_W$:	100.0 dpm/100cm²
Transuranic $DCGL_{EMC}$:	300.0 dpm/100cm²

Removable Surface Activity Measurements

Nbr Random Measurements Required: 15 | Nbr Biased Measurements Required: 0

Nbr Random Measurements Performed: 21 | Nbr Biased Measurements Performed: 0

Alpha

Maximum:	2.4 dpm/100cm²
Minimum:	-0.6 dpm/100cm²
Mean:	-0.3 dpm/100cm²
Standard Deviation:	0.8
Transuranic $DCGL_W$:	20.0 dpm/100cm²

Media Sample Results

Nbr Random Required: 0 | Nbr Biased Required: 0

Nbr Random Collected: 0 | Nbr Biased Collected: 0

Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.

Survey Area: 5	Survey Unit: 903002	Building: 903B

Description: Building 903B Decon Station Interior

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	702058	08/27/04	Electra	677	DP-6	01/23/05	0.193	NA	48.0	NA	T/S
2	903346	08/27/04	Electra	1379	DP-6	02/18/05	0.220	NA	48.0	NA	T/S
3	702058	08/27/04	Electra	1415	DP-6	10/27/04	0.217	NA	48.0	NA	S
4	701418	08/28/04	Electra	1379	DP-6	02/18/05	0.220	NA	48.0	NA	S
5	700831	08/28/04	Electra	1415	DP-6	10/27/04	0.217	NA	48.0	NA	T
6	702058	08/28/04	SAC-4	961	NA	09/30/04	0.330	NA	10.0	NA	R

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

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Survey Area: 5	Survey Unit: 903002	Building: 903B

Description: Building 903B Decon Station Interior

Random Removable Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
903002PRP-N001	6	-0.6	N/A	
903002PRP-N002	6	-0.6	N/A	
903002PRP-N003	6	-0.6	N/A	
903002PRP-N004	6	-0.6	N/A	
903002PRP-N005	6	2.4	N/A	
903002PRP-N006	6	-0.6	N/A	
903002PRP-N007	6	-0.6	N/A	
903002PRP-N008	6	-0.6	N/A	
903002PRP-N009	6	-0.6	N/A	
903002PRP-N010	6	-0.6	N/A	
903002PRP-N011	6	-0.6	N/A	
903002PRP-N012	6	-0.6	N/A	
903002PRP-N013	6	-0.6	N/A	
903002PRP-N014	6	-0.6	N/A	
903002PRP-N015	6	-0.6	N/A	
903002PRP-N016	6	-0.6	N/A	
903002PRP-N017	6	-0.6	N/A	
903002PRP-N018	6	-0.6	N/A	
903002PRP-N019	6	0.9	N/A	
903002PRP-N020	6	-0.6	N/A	
903002PRP-N021	6	0.9	N/A	

Comments:

Survey Area: 5	Survey Unit: 903002	Building: 903B

Description: Building 903B Decon Station Interior

Random/QC Total Surface Activity Data Sheet

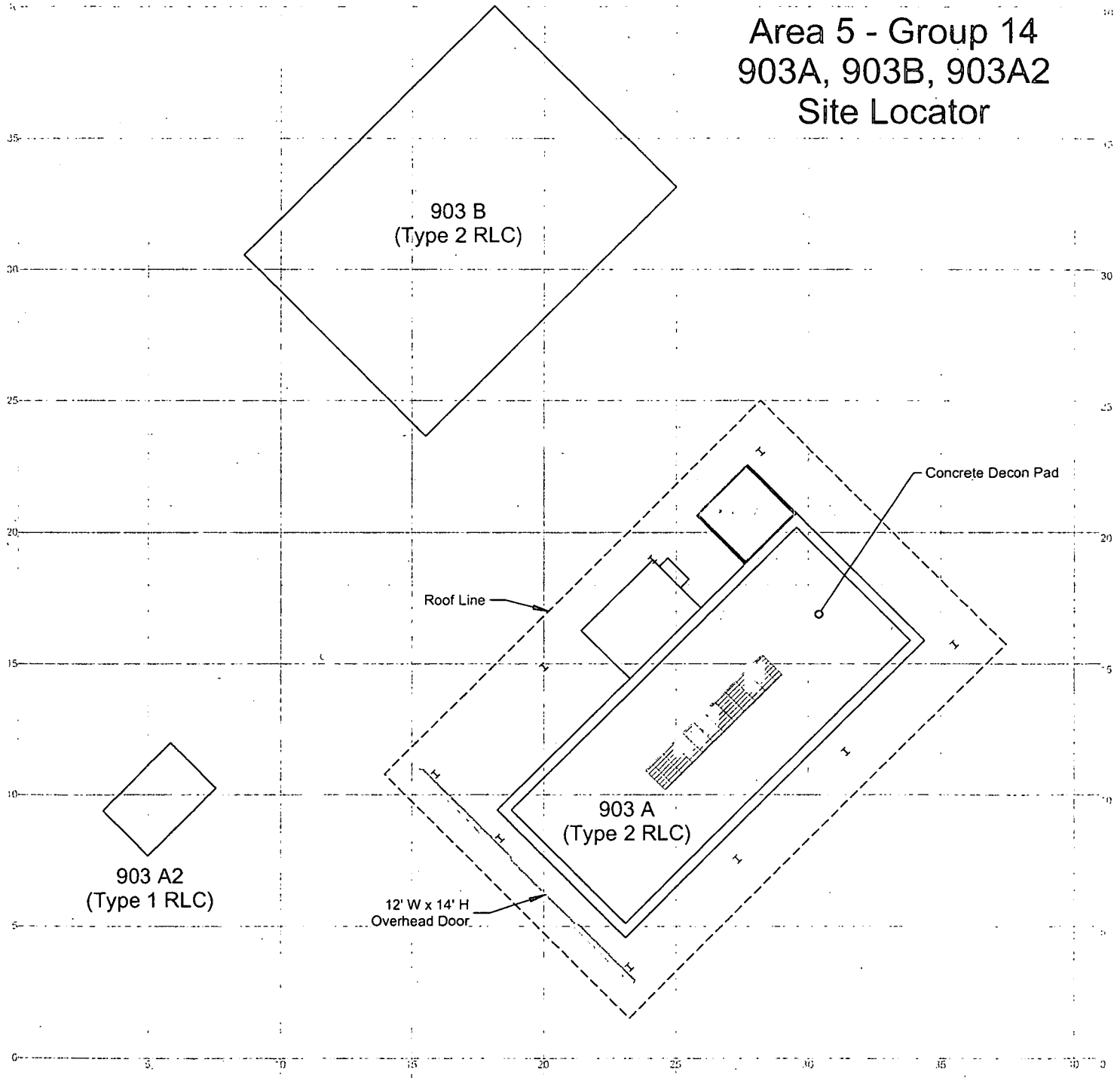
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
903002PRP-N001	2	23.0	N/A	
903002PRP-N002	1	2.0	N/A	
903002PRP-N003	2	-6.1	N/A	
903002PRP-N004	1	-5.3	N/A	
903002PRP-N005	2	-2.9	N/A	
903002PRP-N006	1	10.3	N/A	
903002QRP-N006	5	10.1	N/A	
903002PRP-N007	2	0.3	N/A	
903002PRP-N008	1	-8.4	N/A	
903002PRP-N009	2	-2.9	N/A	
903002PRP-N010	1	-5.3	N/A	
903002PRP-N011	2	6.2	N/A	
903002PRP-N012	1	2.0	N/A	
903002PRP-N013	2	-2.9	N/A	
903002PRP-N014	1	2.0	N/A	
903002PRP-N015	2	-6.1	N/A	
903002PRP-N016	1	-5.3	N/A	
903002PRP-N017	2	3.0	N/A	
903002QRP-N017	5	5.5	N/A	
903002PRP-N018	1	-1.6	N/A	
903002PRP-N019	2	6.2	N/A	
903002PRP-N020	1	2.0	N/A	
903002PRP-N021	2	-2.9	N/A	

Comments:

TYPE 1 & 2 PDS SURVEYS FOR AREA 5, GROUP 14

Survey Area: 5 **Survey Unit: N/A** **Classification: N/A**
Buildings: 903A, 903B, 903A2
Description: Group Locator

Area 5 - Group 14
903A, 903B, 903A2
Site Locator



SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):

NO SCALE
This map for reference only.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 **Prepared for:**

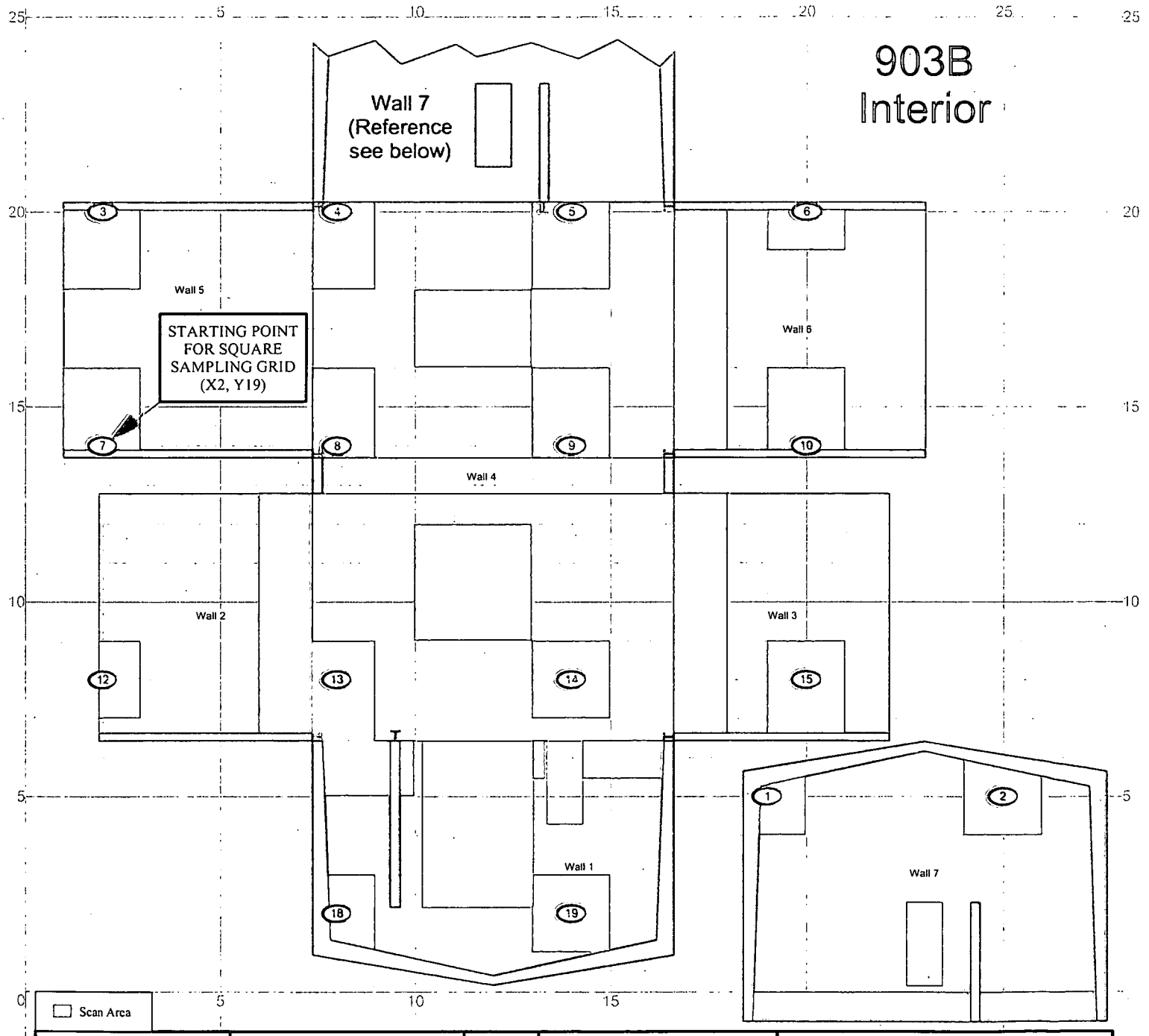
CH2MHILL Communications Group

KAISER-HILL COMPANY

MAP ID: 03-0000 **June 16, 2003**

TYPE 2 PDS SURVEY FOR Building 903 B

Survey Area: 5 **Survey Unit: 903002** **Classification: 2**
Building: 903B
Survey Unit Description: Bldg 903B Decon Station Interior
Total Area: 575 sq. m. **Interior Floor Area: 122 sq. m.**
Grid Spacing for Survey Points: 6m. X 6m.



Scan Area

SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

NE

0 FEET 15
0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1, 2, 3, 4

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 **Prepared for:**

CH2MHILL Communications Group

KAISER-HILL COMPANY

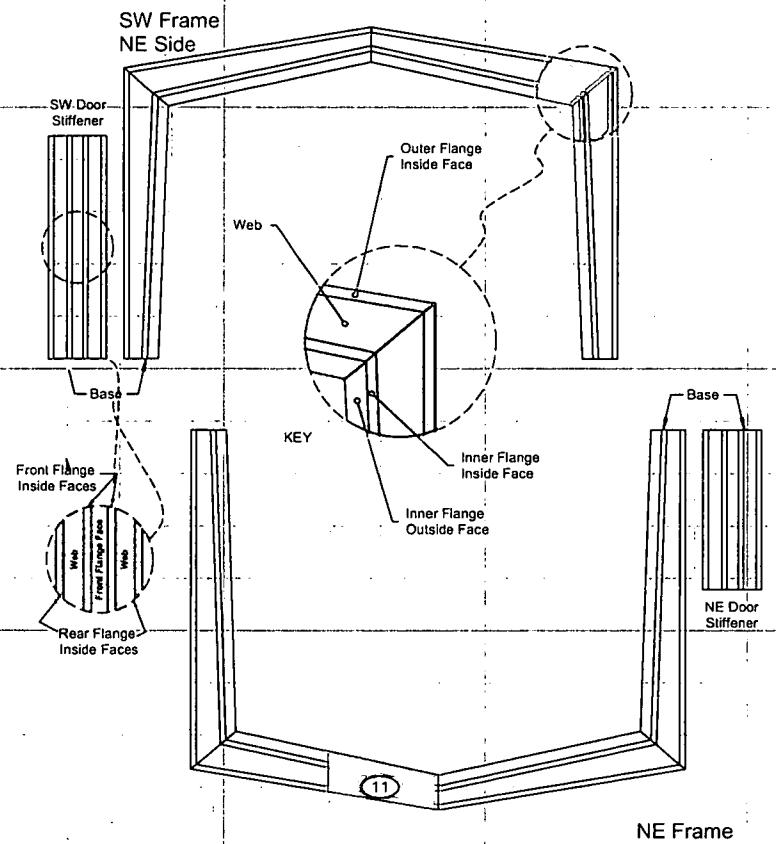
MAP ID: 03-JS/903B_PG1-SC **Aug. 31, 2004**

21

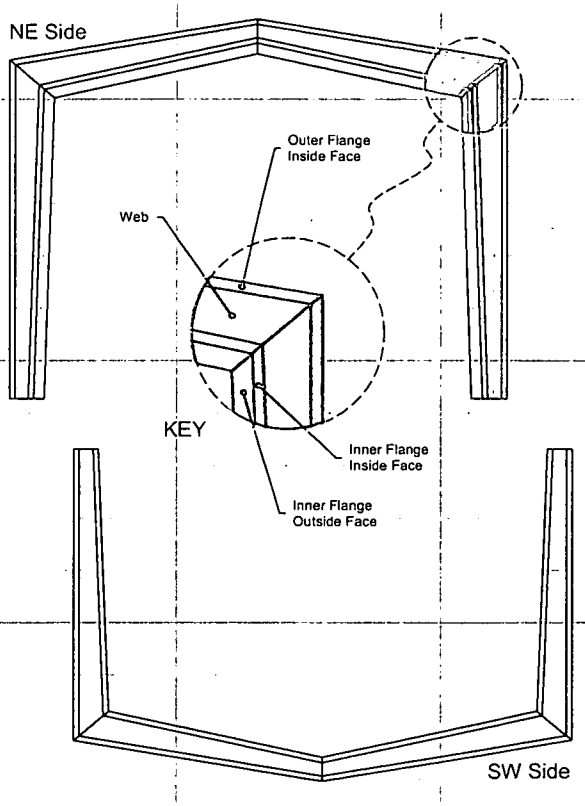
TYPE 2 PDS SURVEY FOR Building 903 B

Survey Area: 5 **Survey Unit: 903002** **Classification: 2**
Building: 903B
Survey Unit Description: Bldg 903B Decon Station Interior
Total Area: 575 sq. m. **Interior Floor Area: 122 sq. m.**
Grid Spacing for Survey Points: 6m. X 6m.

903B Interior End Frames



903B Interior Center Frames



Scan Area

SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

NE

0 FEET 15
0 METERS 5

1 inch = 12 feet . 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1, 2, 3, 4

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 **Prepared for:**

CH2MHILL Communications Group

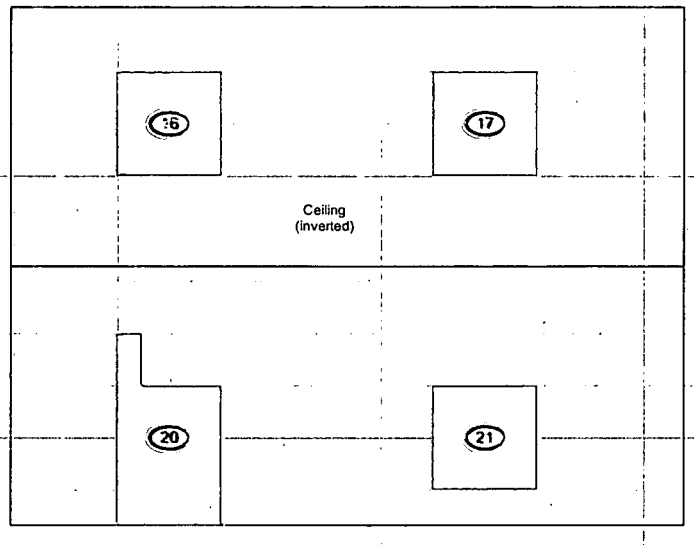
KAISER-HILL COMPANY

MAP ID: 03-JS/903B_PG2-SC **Aug. 31, 2004**

TYPE 2 PDS SURVEY FOR Building 903 B

Survey Area: 5 **Survey Unit: 903002** **Classification: 2**
Building: 903B
Survey Unit Description: Bldg 903B Decon Station Interior
Total Area: 575 sq. m. **Interior Floor Area: 122 sq. m.**
Grid Spacing for Survey Points: 6m. X 6m.

903B Interior Ceiling (inverted)



Scan Area

SURVEY MAP LEGEND
- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

NE

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1, 2, 3, 4

0 FEET 15
0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 **Prepared for:**

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KAISER-HILL COMPANY

MAP ID: 03-JS/903B_PG3-SC **Aug. 31, 2004**

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Survey Area: 5	Survey Unit: 903003	Building: 903B

Description: Building 903B Decon Station Exterior

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Nbr Random Measurements Required: 15 | Nbr Biased Measurements Required: 0 | Nbr QC Required: 2

Nbr Random Measurements Performed: 16 | Nbr Biased Measurements Performed: 0 | Nbr QC Performed: 2

Alpha

Maximum:	96.7 dpm/100cm²
Minimum:	-1.5 dpm/100cm²
Mean:	39.6 dpm/100cm²
Standard Deviation:	35.3
QC Maximum:	75.3 dpm/100cm²
QC Minimum:	25.6 dpm/100cm²
QC Mean:	50.4 dpm/100cm²
Transuranic DCGL$_W$:	100.0 dpm/100cm²
Transuranic DCGL$_{EMC}$:	300.0 dpm/100cm²

Removable Surface Activity Measurements

Nbr Random Measurements Required: 15 | Nbr Biased Measurements Required: 0

Nbr Random Measurements Performed: 16 | Nbr Biased Measurements Performed: 0

Alpha

Maximum:	3.0 dpm/100cm²
Minimum:	0.0 dpm/100cm²
Mean:	0.9 dpm/100cm²
Standard Deviation:	1.1
Transuranic DCGL$_W$:	20.0 dpm/100cm²

Media Sample Results

Nbr Random Required: 0 | Nbr Biased Required: 0

Nbr Random Collected: 0 | Nbr Biased Collected: 0

Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.

Survey Area: 5	Survey Unit: 903003	Building: 903B

Description: Building 903B Decon Station Exterior

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	700831	08/25/04	Electra	1415	DP-6	10/27/04	0.217	NA	48.0	NA	T/S
2	511390	08/25/04	Electra	1379	DP-6	02/18/05	0.220	NA	48.0	NA	T/S
4	511390	08/30/04	Electra	1415	DP-6	10/27/04	0.217	NA	48.0	NA	T/S
5	700831	08/31/04	Electra	3102	DP-6	02/19/05	0.223	NA	48.0	NA	T/S
6	511390	08/31/04	Electra	3370	DP-6	02/16/05	0.221	NA	48.0	NA	Q/S
7	511390	08/31/04	SAC-4	961	NA	09/30/04	0.330	NA	10.0	NA	R

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

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Survey Area: 5	Survey Unit: 903003	Building: 903B

Description: Building 903B Decon Station Exterior

Random Removable Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
903003PRP-N001	7	1.5	N/A	
903003PRP-N002	7	1.5	N/A	
903003PRP-N003	7	1.5	N/A	
903003PRP-N004	7	0.0	N/A	
903003PRP-N005	7	0.0	N/A	
903003PRP-N006	7	0.0	N/A	
903003PRP-N007	7	0.0	N/A	
903003PRP-N008	7	0.0	N/A	
903003PRP-N009	7	3.0	N/A	
903003PRP-N010	7	3.0	N/A	
903003PRP-N011	7	0.0	N/A	
903003PRP-N012	7	0.0	N/A	
903003PRP-N013	7	1.5	N/A	
903003PRP-N014	7	1.5	N/A	
903003PRP-N015	7	1.5	N/A	
903003PRP-N016	7	0.0	N/A	

Comments:

Survey Area: 5	Survey Unit: 903003	Building: 903B

Description: Building 903B Decon Station Exterior

Random/QC Total Surface Activity Data Sheet

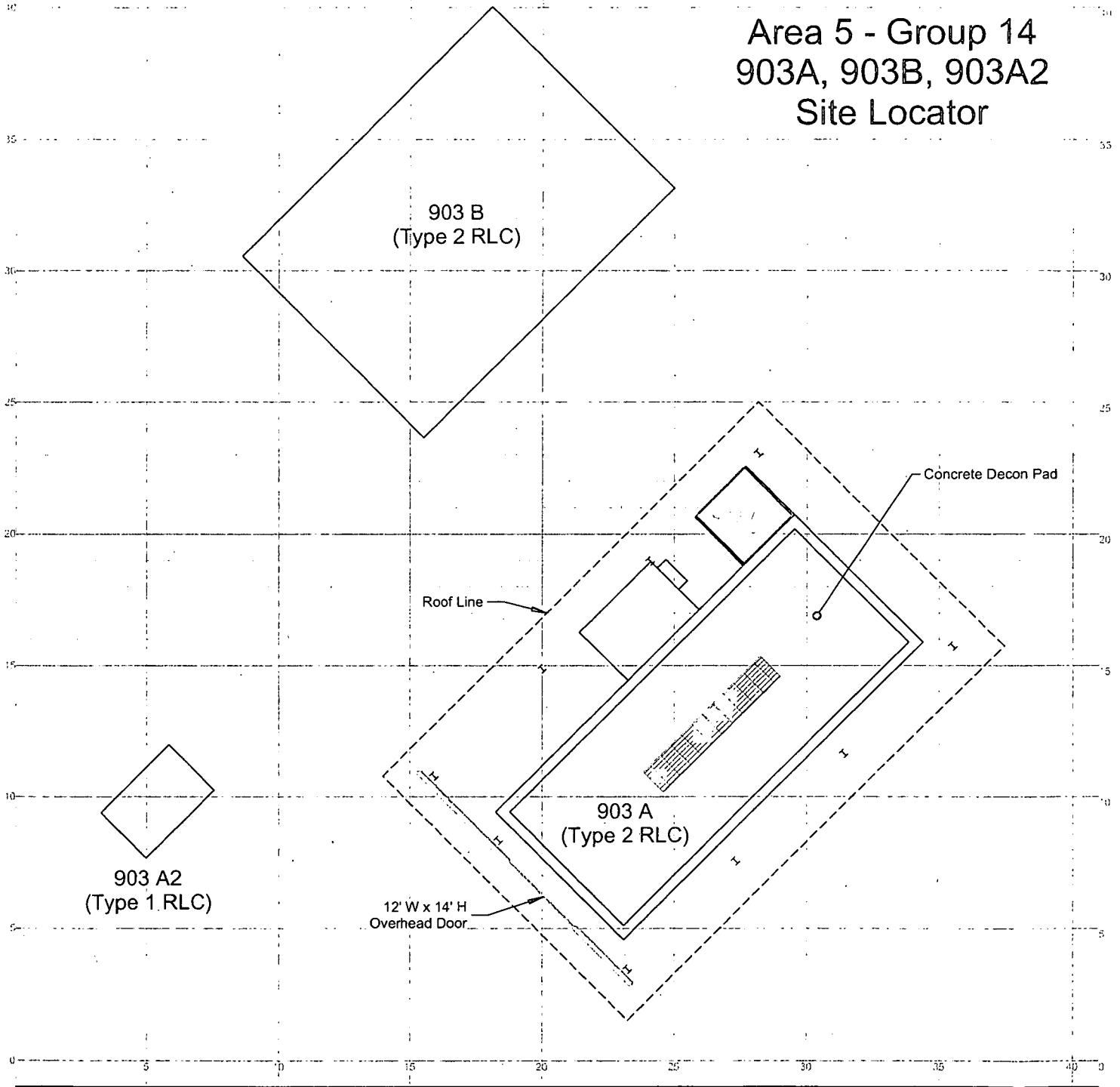
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
903003PRP-N001	1	-1.5	N/A	
903003PRP-N002	1	4.5	N/A	
903003PRP-N003	4	20.2	N/A	
903003PRP-N004	4	29.4	N/A	
903003PRP-N005	5	96.7	N/A	
903003PRP-N006	5	81.9	N/A	
903003PRP-N007	5	72.9	N/A	
903003PRP-N008	1	1.8	N/A	
903003PRP-N009	1	7.7	N/A	
903003PRP-N010	1	23.0	N/A	
903003QRP-N010	6	25.6	N/A	
903003PRP-N011	1	13.7	N/A	
903003PRP-N012	5	81.9	N/A	
903003QRP-N012	6	75.3	N/A	
903003PRP-N013	5	69.8	N/A	
903003PRP-N014	5	87.7	N/A	
903003PRP-N015	4	13.7	N/A	
903003PRP-N016	4	29.4	N/A	

Comments:

TYPE 1 & 2 PDS SURVEYS FOR AREA 5, GROUP 14

Survey Area: 5 **Survey Unit: N/A** **Classification: N/A**
Buildings: 903A, 903B, 903A2
Description: Group Locator

Area 5 - Group 14
903A, 903B, 903A2
Site Locator



SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):

NO SCALE
This map for reference only.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 **Prepared for:**

CH2MHILL Communications Group

KAISER-HILL

MAP ID: 03-0000 **June 16, 2003**

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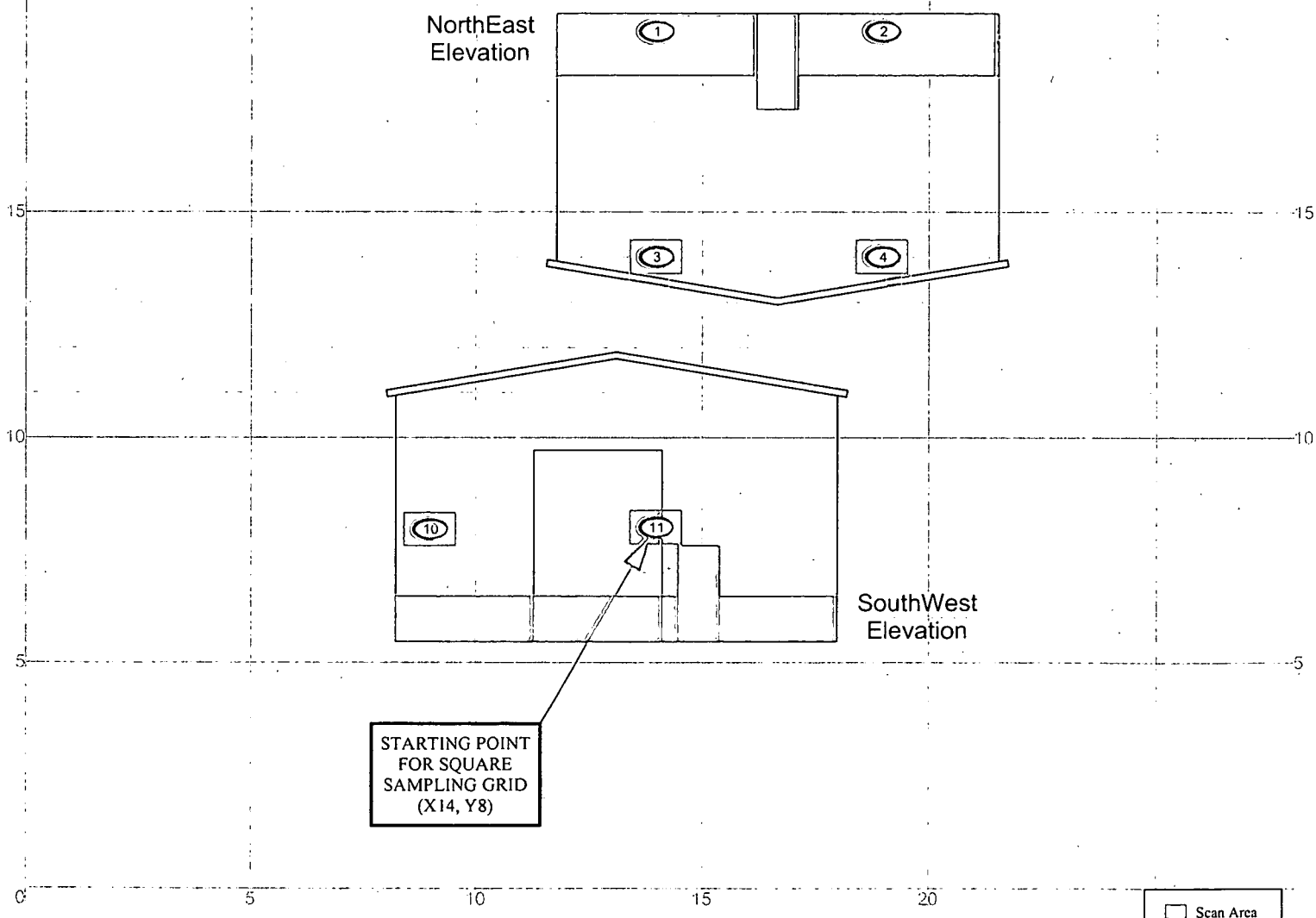
TYPE 2 PDS SURVEY FOR Building 903 B

Survey Area: 5 Survey Unit: 903003 Classification: 2
Building: 903B
Survey Unit Description: Bldg 903B Decon Station Exterior
Total Area: 389 sq. m. Interior Floor Area: 122 sq. m.
Grid Spacing for Survey Points: 5m. X 5m.

903B Exterior



Scan Area

SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

NE

0 FEET 15
0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1, 2, 4, 5, 6

U.S. Department of Energy
Rocky Flats Environmental Technology Site

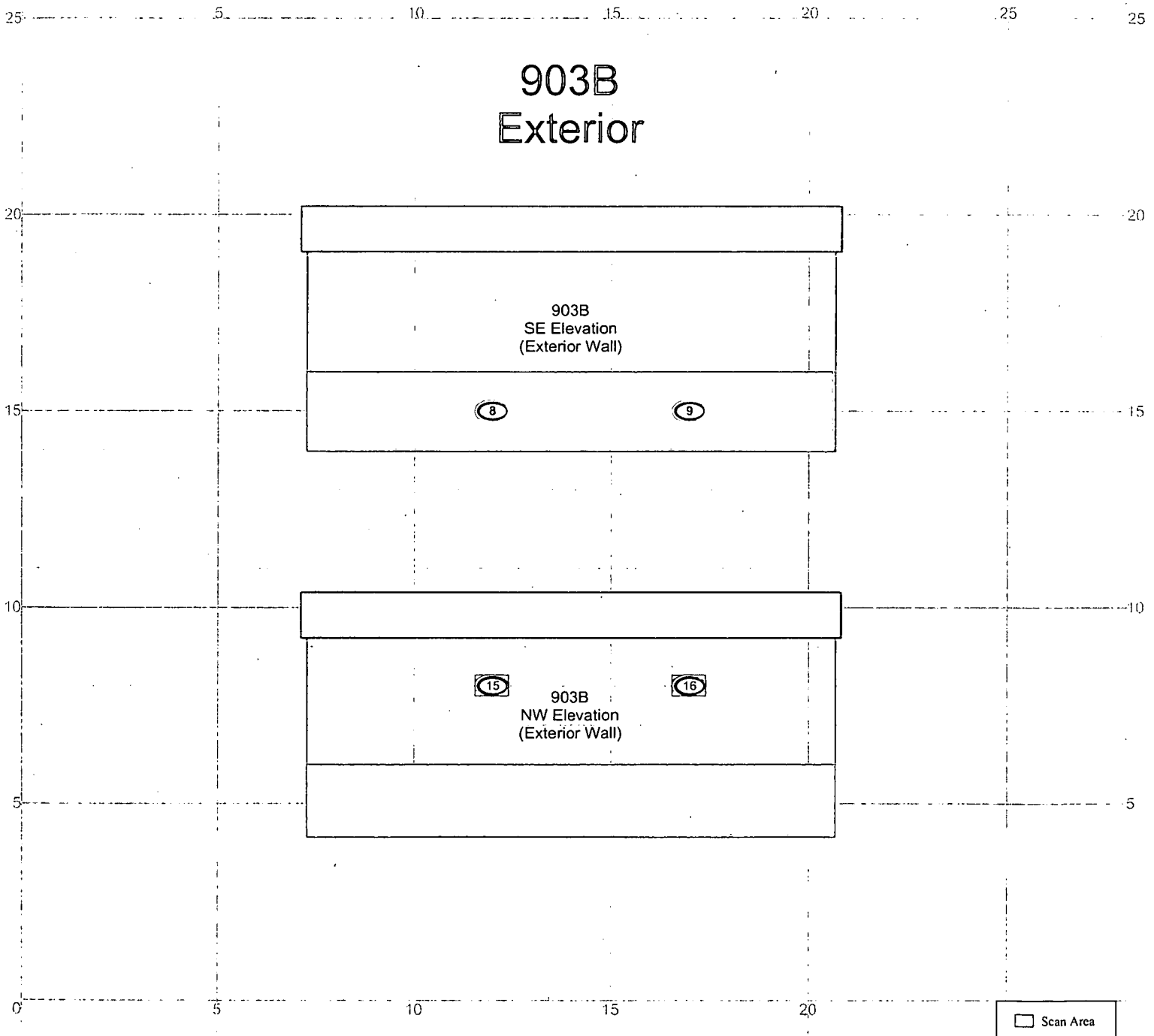
Prepared by: GIS Dept. 303-966-7707 Prepared for:

CH2MHILL Communications Group

MAP ID: 03-JS/903B_Ext_PG1-SC Sept. 1, 2004

TYPE 2 PDS SURVEY FOR Building 903 B

Survey Area: 5 Survey Unit: 903003 Classification: 2
Building: 903B
Survey Unit Description: Bldg 903B Decon Station Exterior
Total Area: 389 sq. m. Interior Floor Area: 122 sq. m.
Grid Spacing for Survey Points: 5m. X 5m.



Scan Area

SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

NE

0 FEET 15
0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1, 2, 4, 5, 6

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

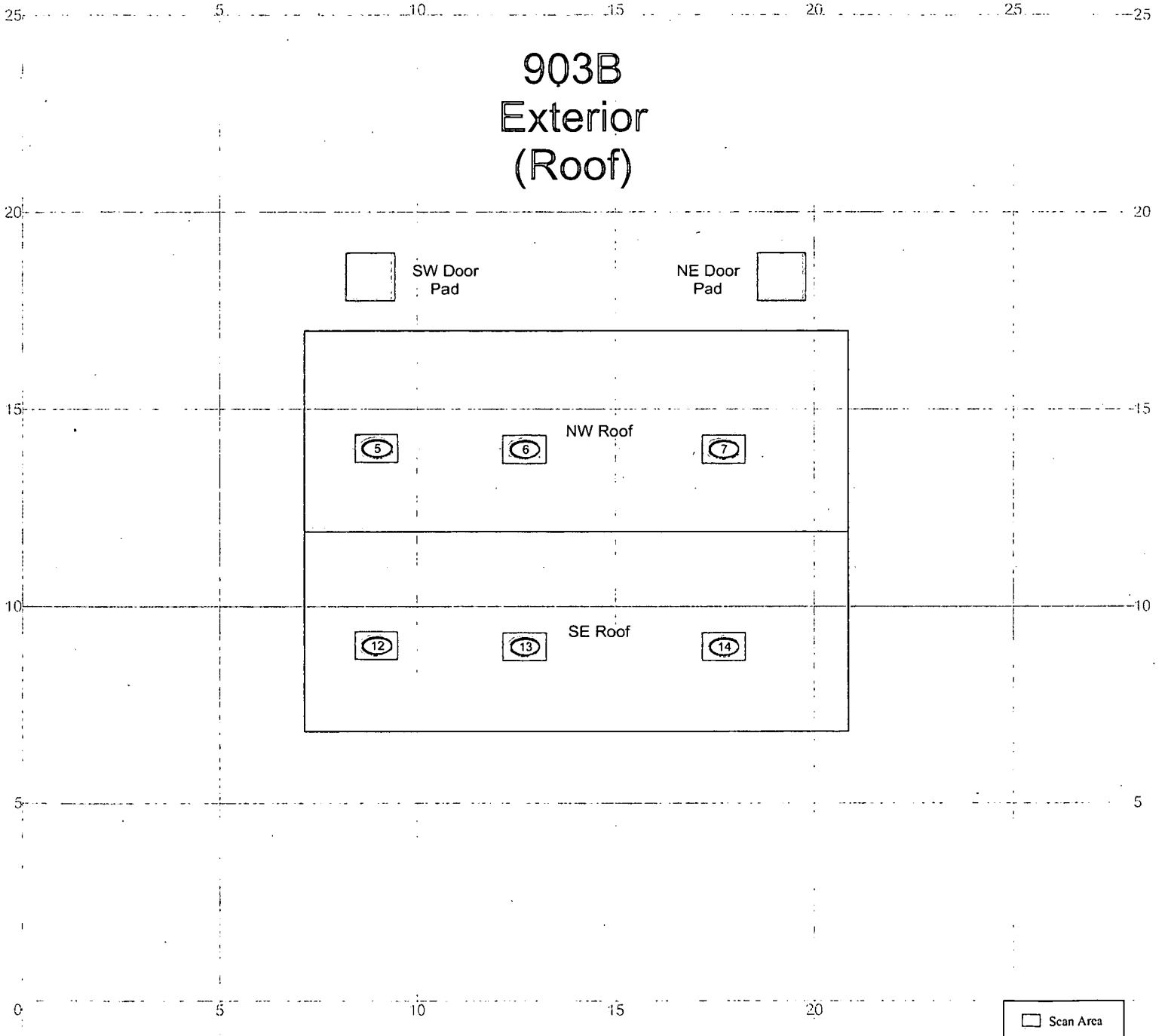
CH2MHILL Communications Group

KAISER-HILL COMPANY

MAP ID: 03-JS/903B_Ext_PG2-SC Sept. 1, 2004

TYPE 2 PDS SURVEY FOR Building 903 B

Survey Area: 5 **Survey Unit: 903003** **Classification: 2**
Building: 903B
Survey Unit Description: Bldg 903B Decon Station Exterior
Total Area: 389 sq. m. **Interior Floor Area: 122 sq. m.**
Grid Spacing for Survey Points: 5m. X 5m.



Scan Area

SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

NE

0 FEET 15
0 METERS 5

1 inch = 12 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
Survey Instrument ID #(s) & RCT ID #(s):
1, 2, 4, 5, 6

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 **Prepared for:**

CH2MHILL Communications Group

KAISER-HILL COMPANY

MAP ID: 03-JS/903B_Ext_PG3-SC **Sept. 1, 2004**

ATTACHMENT C

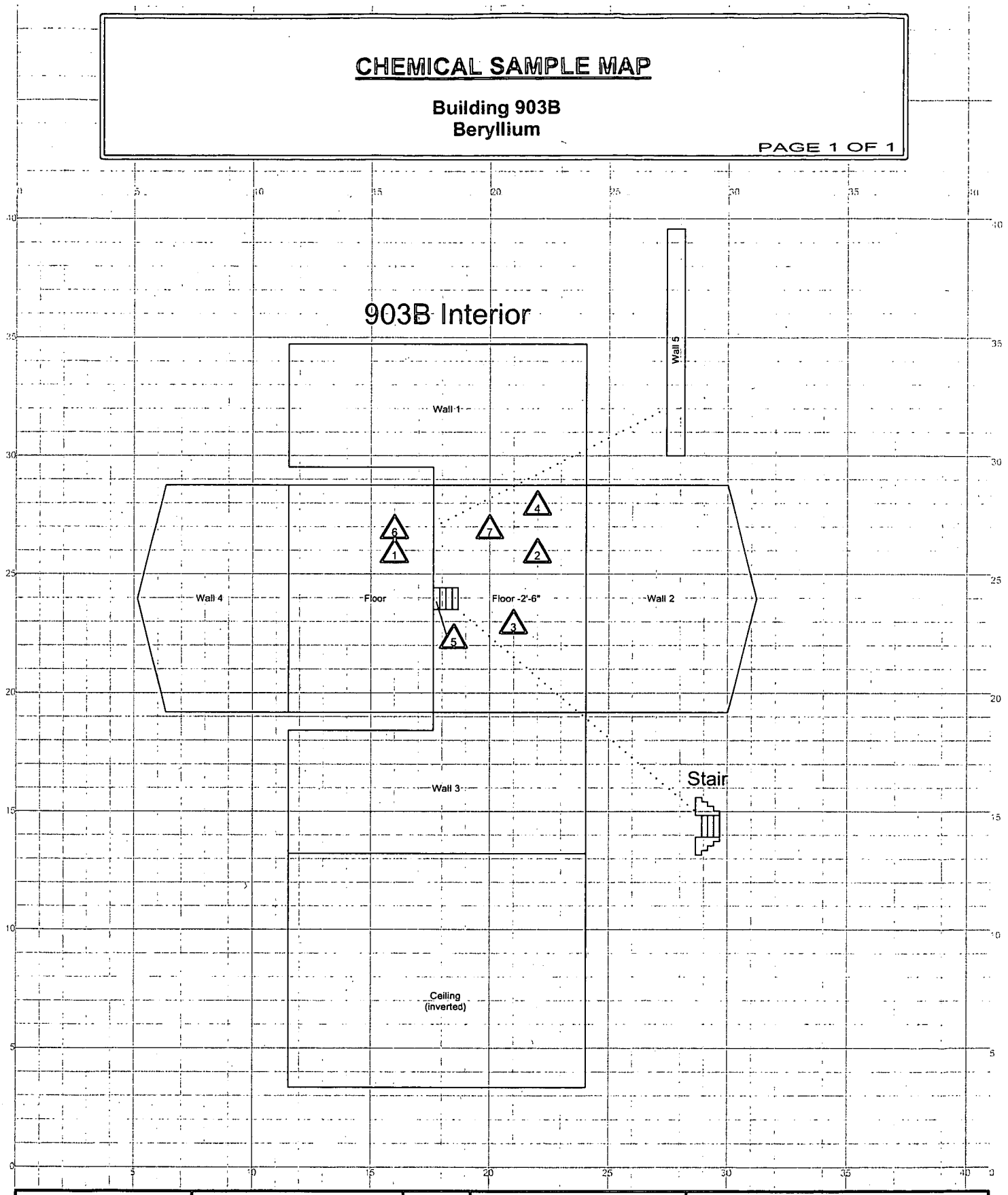
Chemical Data Summaries and Sample Maps

Beryllium Data Summary

Sample Number	Map Survey Point Location	Room	Sample Location	Result ($\mu g/100\ cm^2$)
Building 903B – RIN04Z2520				
903B-08252004-9-001	1	Main	Floor – West Side	< 0.1
903B-08252004-9-002	2	Main	Floor – East Side	< 0.1
903B-08252004-9-003	3	Main	Inside tank T205	< 0.1
903B-08252004-9-004	4	Main	Inside tank T105	< 0.1
903B-08252004-9-005	5	Main	Steps – top center	< 0.1
903B-08252004-9-006	7	Main	Electrical Panel T103-P104	< 0.1
903B-08252004-9-006	7	Main	T104	< 0.1

CHEMICAL SAMPLE MAP

Building 903B
Beryllium



SURVEY MAP LEGEND

- (#) Asbestos Sample Location
- (#) Beryllium Sample Location
- [#] Lead Sample Location
- ◇ RCRA/CERCLA Sample Location
- (#) PCB Sample Location
- [ ] Open/Inaccessible Area
- [ ] Area in Another Survey Unit

N

0 FEET 25

0 METERS 8

1 inch = 18 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

CH2MHILL Communications Group

KAISER-HILL

MAP ID: 03-0201\903B01-BE Aug. 30, 2004

ATTACHMENT D

Data Quality Assessment (DQA) Detail

DATA QUALITY ASSESSMENT (DQA)

VERIFICATION & VALIDATION (V&V) OF RESULTS

V&V of the data confirm that appropriate quality controls are implemented throughout the sampling and analysis process, and that any substandard controls result in qualification or rejection of the data in question. The required quality controls and their implementation are summarized in a tabular, checklist format for each category of data – radiological surveys and chemical analyses (specifically beryllium).

DQA criteria and results are provided in a tabular format for each suite of surveys or chemical analyses performed. The radiological survey assessment is provided in Table D-1 and beryllium in Table D-2. A data completeness summary for all results is given in Table D-3.

All relevant Quality records supporting this report are maintained in the RISS Characterization Project File. The report will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of approval by the Regulators. All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units. Chemical data are organized by RIN (Report Identification Number) and are traceable to the sample number and corresponding sample location.

Beta/gamma survey designs were not implemented for Building 903B based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process. Survey designs were implemented based on the transuranic limits used as DCGLs in the unrestricted release decision process. All survey results were evaluated against, and were less than the Transuranic $DCGL_w$ (100 dpm/100cm^2) and the Uranium $DCGL_w$ (5,000 dpm/100cm^2) unrestricted release limits.

Consistent with EPA's G-4 DQO process, the radiological survey design for each survey unit performed per PDS requirements was optimized by checking actual measurement results acquired during pre-demolition surveys against the model output with original estimates. Use of actual sample/survey (result) variances in the MARSSIM DQO model confirms that an adequate number of surveys were acquired.

DQA SUMMARY

In summary, the data presented in this report have been verified and validated relative to the quality requirements and project decisions as stated in the original DQOs. All data are useable based on qualifications stated herein and are considered satisfactory without qualification. All media surveyed and sampled yielded results less than their associated action levels and with acceptable certainties.

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Based upon an independent review of the radiological data, it is determined that the original project DQOs satisfied MARSSIM guidance. Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable RSPs, survey units were properly designed and bounded, and instrument performance and calibration were within acceptable limits. All results meet the PDS unrestricted release criteria.

Chain of Custody was intact; documentation was complete, hold times were acceptable (where applicable,) and packaging integrity/custody seals were maintained throughout the sampling/analysis process. Level 2 Isolation Controls have been posted to prevent the inadvertent introduction of contamination into the facility. On this basis, Building 903B meets the unrestricted release criteria with the confidences stated herein.

Table D-1 V&V of Radiological Results - Building 903B

V&V CRITERIA, RADIOLGICAL SURVEYS		K-H RSP 16.00 Series MARSSIM (NUREG-1575)		
QUALITY REQUIREMENTS				
	Parameters	**Measure**	**Frequency**	**COMMENTS**
ACCURACY	Initial calibrations	90%<x<110%	≥1	Multi-point calibration through the measurement range encountered in the field; programmatic records.
	Daily source checks	80%<x<120%	≥1/day	Performed daily/within range.
	Local area background: Field	Typically < 10 dpm	≥1/day	All local area backgrounds were within expected ranges (i.e., no elevated anomalies.)
PRECISION	Field duplicate measurements for TSA	≥5% of real survey points	≥10% of reals	N/A
REPRESENTATIVENESS	MARSSIM methodology: Survey Unit 903002 (interior) and 903003 (exterior).	Statistical and biased	NA	Random w/ statistical confidence.
	Survey Maps	NA	NA	Random and biased measurement locations controlled/mapped to ±1m.
	Controlling Documents (Characterization Pkg; RSPs)	qualitative	NA	Refer to the Characterization Package (planning document) for field/sampling procedures (located in Project files); thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
COMPARABILITY	Units of measure	dpm/100cm^2	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual surveys Usable results vs. unusable	>95% >95%	NA	See Table D-3 for details.
SENSITIVITY	Detection limits	TSA: ≤50 dpm/100cm^2 RA: ≤10 dpm/100cm^2	all measures	PDS MDAs ≤ 50% $DCGL_w$

Table D-2 V&V of Beryllium Results - Building 903B

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
BERYLLIUM	Prep: NMAM 7300 METHOD: OSHA ID-125G	LAB ---->	Johns Manville, Littleton, Co.	
		RIN ---->	RIN04Z2520	
				COMMENTS
QUALITY REQUIREMENTS		Measure	Frequency	No qualifications significant enough to change project decisions. All results were below associated action levels and investigative levels.
ACCURACY	Calibrations Initial	linear calibration	≥1	
	Continuing	80%<%R<120%	≥1	
	LCS/MS	80%<%R<120%	≥1	
	Blanks – lab & field	<MDL	≥1	
	Interference check std (ICP)	NA	NA	
PRECISION	LCSD	80%<%R<120% (RPD<20%)	≥1	
	Field duplicate	all results < RL	≥1	
REPRESENTATIVENESS	COC	Qualitative	NA	
	Hold times/preservation	Qualitative	NA	
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	
COMPARABILITY	Measurement units	ug/100cm^2	NA	
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	Detection limits	MDL of 0.00084 ug/100cm^2	all measures	

Table D-3 Data Completeness Summary - Building 903B					
ANALYTE	**Building/Area/Unit**	**Sample Number Planned (Real & QC)**	**Sample Number Taken (Real & QC)**	**Project Decisions (Conclusions) & Uncertainty**	**Comments (RIN, Analytical Method, Qualifications, etc.)**
Beryllium	Building 903B (interior)	10 biased	7 biased	No contamination found at any location	10CFR850; OSHA ID-125G RIN04Z2520 No results above the action level (0.2 ug/100cm^2) or investigative level (0.1 ug/100cm^2).
Radiological	Survey Area 5 Survey Unit: 903002 Bldg. 903B – Decon Station (Interior)	21 á TSA (systematic) 21 α Smears (systematic) 2 QC TSA 20% scan	21 á TSA (systematic) 21 α Smears (systematic) 2 QC TSA 20% scan	No contamination at any location; all values below unrestricted release levels	Transuranic DCGLs used.
Radiological	Survey Area 5 Survey Unit: 903003 Bldg. 903B Decon Station (Exterior)	16 á TSA (random) 16 α Smears (random) 2 QC TSA 20% scan	16 á TSA (random) 16 α Smears (random) 2 QC TSA 20% scan	No contamination at any location; all values below unrestricted release levels	Transuranic DCGLs used.

ATTACHMENT E

Historical Site Assessment

Facility ID: (AREA 5 - GROUP 14) Buildings 903A, 903A2, and 903B.
Anticipated Facility Type (1, 2, or 3): Buildings 903A and 903B are anticipated Type 2 facilities. Building 903A2 is an anticipated Type 2 facilities.

This facility-specific Historical Site Assessment (HSA) has been performed in accordance with:
D&D Characterization Protocol, RFETS MAN-077-DDCP, latest version, and
Facility Disposition Program Manual, RFETS MAN-076-FDPM, latest version

Physical Description

Buildings 903A

Building 903A is a 1,400 square-foot equipment decontamination facility called the Main Decontamination Facility (MDF) and was constructed in 1993. The facility has a concrete Decontamination Pad with a sump located in the center of the Pad, a metal roof, and a single metal wall on the west side of the Pad. The facility has a plastic curtain containment system, a sump to collect fluid run-off and a pumping system to move liquids to Building 903B. The Pad is sloped and curbed to contain the decontamination water and sediment.

Building 903A has the following utilities: electric, and fire protection is provided by wall mounted fire extinguishers. Domestic water is provided by a fire hydrant located west of the MDF.

Buildings 903A2

Building 903A2 is a 100 square-foot general storage shed acquired in 1993. This structure is a wood building with wood walls, wood floor and an asphalt shingle roof. This building sits on a concrete pad and is located west of the 903A Main Decontamination Facility (MDF).

Building 903A2 has the following utilities: electric.

Buildings 903B

Building 903B is an approximately 2,800 square-foot liquid waste management building constructed in 1995. This facility has a concrete bermed floor and a collection sump in the middle of the building. This building is a steel frame building constructed on a concrete foundation. The walls and roof are insulated corrugated metal. The building is configured with a large highbay area that houses the water treatment equipment.

Building 903B had the following utilities: electric, and fire protection is provided by wall mounted fire extinguishers.

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Historical Operations

Buildings 903A

Building 903A is the sites main decontamination facility for ER activities and is used to decontaminate field equipment such as sampling equipment, drill rigs, and field vehicles. These items are decontaminated through the used of high-pressure hot water. On occasion Liquinox or some other non-phosphorous detergent is used during this process. Prior to the beginning of decontamination activities, the equipment is surveyed to determine the presence of radioactive material. Water used on the Decontamination Pad is obtained from a fire hydrant and is pumped into a 1,200-gallon raw water supply tank. Decontamination fluids are collected by a sump in the center of the Decontamination Pad and are transferred to Building 903B (the Environmental Liquids Management Area) where the wastewater goes through several processes to remove solid.

Buildings 903A2

903A2 is a small general storage building located west of the 903A Decontamination Pad. This building is used to store PPE and for general storage in support of the 903A Decontamination Pad.

Buildings 903B

Building 903B is the Environmental Liquids Management Area for the Decontamination Pad. Wastewater is pumped from the Decontamination Pad to a series of funnel shaped separators where the solids are settled out of the wastewater and collected in 55-gallon drums. These drums are then sampled and appropriately disposed of. The final wastewater is trucked to the Building 891 water treatment facility for final treatment. In the past, only trace amounts of radioactive material and RCRA contaminants were found in the wastewater and sediment generated by the Decontamination Pad.

Current Operational Status

Buildings 903A, 903A2, and 903B are all operational.

Contaminants of Concern

Asbestos

Describe any potential, likely, or known sources of Asbestos:

None of the facilities addressed in this HSA have an asbestos posting.

Beryllium (Be)

Describe any potential, likely, or known Be production or storage locations:

None of the facilities addressed in this HSA are on the List of known Be Areas.

Summarize any recent Be sampling results:

There have been no recent Be samples collected on any of these facilities.

Lead

Describe any potential, likely, or known sources of Lead (e.g., paint, shielding, etc.):

Based on the age of some of the facilities addressed in this HSA, lead in paint should not be a concern. No processes containing lead were conducted in these facilities.

RCRA/CERCLA Constituents

Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e.g., chemical storage, waste storage, and processes):

The 903 Decontamination Pad is RCRA unit 18.01, which was partially closed in accordance with "RCRA Closure Plan for Partial Closure of Interim Status Unit 18.01" (5/3/96). The remainder of the RCRA unit will be closed in accordance with "RCRA Closure Plan for the RADP" (5/16/96). Buildings 903A and 903B are used to decontaminate field equipment with trace amounts of RCRA/CERCLA Constituents. See the Historical Operations section above for a more detailed listing of the operations which occurred in the facilities addressed in this HSA.

Describe any potential, likely, or known spill locations (and sources, if any):

None of the facilities in this HSA have had any RCRA/CERCLA spills.

Describe methods in which spills were mitigated, if any:

None of the facilities in this HSA have had any RCRA/CERCLA spills.

PCBs

Describe any potential, likely, or known sources of PCBs (e.g., light ballasts, paints, equipment, etc.):

No PCB containing process where housed in any of the facilities addressed in this HSA. Based on the age of construction of some of these facilities, PCBs in paint should not be a concern.

Describe any potential, likely, or known spill locations (and sources, if any):

No PCB spills occurred in any of the Facilities addressed in this HSA.

Describe methods in which spills were mitigated, if any:

No PCB spills occurred in any of the Facilities addressed in this HSA.

Radiological Contaminants

Describe any potential, likely, or known radiological production or storage locations:

Buildings 903A and 903B are used to decontaminate field equipment with trace amounts of radiological contamination. See the Historical Operations section above for a more detailed listing of the operations which occurred in the facilities addressed in this HSA.

Describe any potential, likely, or known spill locations (e.g., known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc.):

None of the facilities in this HSA have had a radiological spill.

Describe methods in which spills were mitigated, f any:

None of the facilities in this HSA have had a radiological spill.

Describe any potential, likely, or known isotopes of concern (e.g., weapons grade plutonium, uranium isotopes, pure beta emitters, mixed fission products, etc.):

Isotopes of concern include uranium and plutonium.

Describe any potential, likely, or known external facility contamination (e.g., stack release points, unfiltered ventilation, facility's physical location to known site releases, etc.):

See section below for information on IHSSs PACs, and UBCs.

Environmental Restoration Concerns

Describe any ER concerns that could affect facility characterization (e.g., IHSSs, PACs, UBCs):

Buildings 903A, 903A2, and 903B are located near the following IHSSs, PACs, or UBCs. See individual IHSS, PAC, or UBC report for additional information.

900-119.2, "East Scrap Metal Storage Area and Solvent Spill", NFA approved 1997 OU-1 CAD/ROD

Additional Information

Describe any additional information that may be useful during facility characterization (e.g., contaminant migration routes, waste handling operations, physical hazards, Historical Release Reports, WSRIC data, etc.):

None

References

Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews):

Sources reviewed to complete this HSA were the RFETS Facility List, the Historical Release Report, Site Master List of RCRA Units, and the Site IHSS, PAC, and UBC databases. The WSRIC for those buildings with a WSRIC. In addition, a facility walkdown and interviews were performed.

Waste Volume Estimates and Material Types

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
Building 903A	800	200	800	500	0	TBD	N/A
Building 903A2	50	200	0	0	0	TBD	N/A
Building 903B	1400	0	1700	1000	0	TBD	N/A

Further Actions

Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):

Begin the RLC/PDS process.

Note:

This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations. SMEs should evaluate and/or verify all information during the RLC/PDS process. SMEs may need to review additional documentation and perform additional interviews. Information contained in this HSA only represents a "snapshot" in time. Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations, which may conflict with this report. However, this report will not be amended, and the newer data will take precedence over the data in this report. Newer Data will appear in the RLCR/PDSR.

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